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**Subject:** Application of Cates et al.  
Serial Number: 10/044,171  
Filed: October 22, 2001  
Group Art Unit: 1774  
Case No.: 5235  
**U.S. PTO Customer No. 25280**

**Date:** Wednesday June 14, 2006

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- Notice of Appeal: 1 page
- Appeal Brief: 12 pages
- Amendment filed with an Appeal Brief: 6 pages

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application of: Cates et al.  
Serial Number: 10/044,171  
Filed: October 22, 2001  
For: Coated Textile Substrate for Image Printing  
Group Art Unit: 1774  
Examiner: Shewareged, Betelhem

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**APPEAL BRIEF**

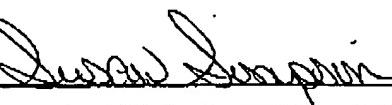
The original claims of the above referenced application were the subject of a rejection in an Office Action dated November 22, 2005, and a final rejection in an Office Action dated April 26, 2006 rejecting claims 1, 3, and 23-28. A Notice of Appeal for the above referenced application has been filed herewith. The following is a brief in support of the Appellant's position. The Commissioner is hereby authorized to withdraw any fees required for submission of this Appeal Brief from our Deposit Account No. 04-0500.

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**(i) REAL PARTY IN INTEREST**

The above referenced application is the subject of an assignment to Milliken & Company, located in Spartanburg, S.C., which is the real party in interest.

**(ii) RELATED APPEALS AND INTERFERENCES**

Appellant is not aware of any related appeals or interferences that may directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

**(iii) STATUS OF CLAIMS**

The above referenced application contains claims 1, 3, and 23-28 and a copy of the claims as pending is attached as Appendix A. Claims 4-22 were withdrawn from consideration as a non-elected invention. An amendment is submitted herein with the appeal brief which conforms to the requirements of 37 CFR 1.116 in that it places the application in better form for appeal. Applicants respectfully request entry of this amendment submitted herein. The amendment amends claim 3 to depend on claim 1.

**(iv) STATUS OF AMENDMENTS**

An amendment is submitted herein with the appeal brief which conforms to the requirements of 37 CFR 1.116 in that it places the application in better form for appeal. The amendment amends claim 3 to depend on claim 1.

**(v) SUMMARY OF CLAIMED SUBJECT MATTER**

In the present invention, a coating having cationic and repellent characteristics is coated onto the surface of a textile to receive a colorant image by processes such as digital printing. The coating comprises a combination of a repellent finish chemical, a cationic material, and a sorbant polymer.

Generally, the textile of the present invention can include banner or sign fabrics, upholstery fabrics, drapery fabrics, other fabrics for home furnishings, napery fabrics, apparel fabrics, carpeting, and the like. The textile can be a woven, knitted, non-woven material, tufted materials, and the like. Woven textiles can include, but are not limited to, satin, poplin, and crepe weave textiles. Knit textiles can include, but are not limited

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to, circular knit, warp knit, and warp knit with a microdenier face. (Page 3, line 6-16)

Repellant finish chemicals include fluorochemicals, silicones, resin-based finishes, waxes, wax-metal emulsions, organometallic complexes, and combinations thereof. It is believed that the repellent properties of the repellent finish chemicals help prevent the colorant from being absorbed into the textile, and facilitates allowing the colorant to fill the entire intended zone for the colorant. (Page 3, lines 17-22)

Fluorochemical repellants include chemicals that contain perfluorocarbon groups. The fluorochemical repellants can be the products of copolymers of perfluoroalkyl acrylates or methacrylates with other comonomers. The comonomers include esters of acrylic or methacrylic acid containing alkyl groups, alkylamide groups, or polyether groups. The fluorochemical repellants can also be emulsions or solvent solutions for application to the textile material. (Page 3, lines 23-29)

Cationic materials are materials that have a positive charge. The charge of the cationic material could also be a partial charge. It is believed that the cationic material helps hold the colorant on the surface of the intended zone, thereby reducing any bleeding of the color medium into unintended areas or absorption of the colorant into the textile. (Page 5, lines 8-12)

Metal salts that can be used for the cationic material of the present invention include water soluble salts of cations from Group II, Group III, or the Transition Metals of the Periodic Table. Examples include magnesium, calcium, aluminum, zinc, zirconium, and boron. In one embodiment, the salts have an anion of a weak acid, such as acetate forming or the like. (Page 6, lines 1-5)

The coating having cationic and repellent properties is applied to the textile and then the image is placed upon the surface of the textile having the coating thereon. (Page 9, lines 7-9)

**(vi) ISSUES TO BE REVIEWED ON APPEAL**

- A. Whether Or Not Claims 1, 3, and 23-28 Are Patentable Over Mishima (US Patent 6,183,851) in view of Kawasaki et al. (US Patent 6,338,891).

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**(vii) ARGUMENT****A. Whether Or Not Claims 1, 3, and 23-28 Are Patentable Over Mishima (US Patent 6,183,851) in view of Kawasaki et al. (US Patent 6,338,891).**

Claims 1, 3, and 23-28 were rejected as obvious over Mishima (US Patent 6,183,851) in view of Kawasaki et al. (US Patent 6,338,891). The Office Action states that Mishima teaches an inkjet recording medium comprising a support and a coating layer, the coating layer comprising a polysaccharide binder (equivalent to the claimed sorbant), a metal salt (equivalent to the claimed cationic material), and silicone oil (equivalent to the claimed repellent). Applicants respectfully traverse this rejection for the following reasons.

**Claims 1, 3, 23-25, and 27-28**

The Office Action states that Mishima does not teach the use of a fluorocarbon resin in place of the silicone oil, but that Kawasaki teaches an ink jet recording sheet with an ink receiving layer comprising repellants such as fluorocarbon resin, silicone resin, and alkyl ketene dimer. The Office Action takes Official Notice of the equivalence of fluorocarbon resin and silicone oil in ink receiving art and states that selection of any of these known equivalents to make an ink jet receiving layer would be within the level of ordinary skill in the art. The Applicants respectfully disagree.

Applicants believe that Mishima and Katsuhiko et al. were improperly combined for a *prima facie* obviousness rejection. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 860, 16 USPQ2d 1430, 4132 (Fed. Cir. 1990). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Mishima discloses silicone oils as a high boiling organic solvent for use as a plasticizer, lubricant, or anticurling agent (Col 16, lines 1-6). Kawasaki et al. discloses the use of a fluorocarbon resin type or silicone resin type as a water repellant and sizing agent. There is no motivation, teaching, or suggestion in Mishima to use a fluorocarbon resin type water repellant and sizing agent as a replacement for the silicone oil

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plasticizer, lubricant, or anticurling agent. Therefore, Applicants respectfully believe that the requirements of obviousness has not been met.

Claim 26

Claim 26 includes the recitation that the cationic material comprises a water soluble metal salt of cations selected from the group of the periodic table consisting of: Group II, Group III, and the Transition Metals. Mishima discloses salts of alkaline earth metals (barium sulfate, calcium carbonate, magnesium sulfate) as examples of a solid particulate matting agent (Col 13, lines 27-35). These matting agents of Mishima are dispersible in a hydrophilic organic colloidal binder, but are well known to be insoluble in water. If the particles were soluble in water (i.e. the particles dissolved in water) then they would no longer function as a solid particle necessary for the particle to function in their intended use as a matting particle. Neither Mishima, nor Kawasaki et al., together or taken separately, disclose the use of a cationic material comprising a water soluble metal salt of cations selected from the group of the periodic table consisting of: Group II, Group III, and the Transition Metals.

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**Conclusion**

For the above reasons, Appellant respectfully requests the Appeal Board to reverse the decision of the examiner. In the event that there are additional fees associated with the submission of these papers, Applicant hereby authorizes the Commissioner to withdraw those fees from our Deposit Account No. 04-0500. Also, in the event that additional time is required to have the papers submitted herewith for the above referenced application to be considered timely, Applicant hereby petitions for any additional time required to make these papers timely and authorization is hereby granted to withdraw any additional fees necessary for this additional time from our Deposit Account No. 04-0500.

June 14, 2006

Respectfully submitted,

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**(viii) CLAIMS APPENDIX**

1. (Previously presented) A device comprising:  
a textile substrate having a first surface;  
a coating on the first surface of said textile substrate, said coating including a repellent finish chemical, a cationic material, and a sorbant polymer,  
wherein the repellent finish chemical of said coating comprises a repellent fluorochemical.
2. (Cancelled)
3. (Previously presented) The device according to Claim 2, wherein the fluorochemical comprises a repellent chemical from the perfluorocarbon groups.
4. (Withdrawn) The device according to Claim 1, wherein the repellent finish chemical of said coating comprises a silicone repellent.
5. (Withdrawn) The device according to Claim 4, wherein the silicone repellent of said coating comprises a polymer of methyl (hydrogen) siloxane.
6. (Withdrawn) The device according to Claim 4, wherein the silicone repellent of said coating comprises a polymer of dimethylsiloxane.
7. (Withdrawn) The device according to Claim 1, wherein the repellent finish chemical of said coating comprises a resin based finish.
8. (Withdrawn) The device according to Claim 7, wherein the resin based finish comprises a modified melamine formaldehyde resin based finish.
9. (Withdrawn) The device according to Claim 7, wherein the repellent finish chemical of said coating further includes a wax.

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10. (Withdrawn) The device according to Claim 1, wherein the repellent finish chemical of said coating includes material selected from the group consisting of: waxes, wax-metal emulsions, and organometallic complexes.
11. (Withdrawn) The device according to Claim 1, wherein the cationic material of said coating comprises a polymeric compound.
12. (Withdrawn) The device according to Claim 1, wherein the cationic material of said coating comprises a non-polymeric organic compound.
13. (Withdrawn) The device according to Claim 1, wherein the cationic material of said coating comprises a metal salt.
14. (Withdrawn) The device according to Claim 13, wherein the metal salt comprises a water soluble salt of cations selected from the group of the periodic table consisting of: Group II, Group III, and the Transition Metals.
15. (Withdrawn) The device according to Claim 1, wherein the sorbant polymer comprises a synthetic polymer.
16. (Withdrawn) The device according to Claim 1, wherein the sorbant polymer comprises a natural polymer.
17. (Withdrawn) The device according to Claim 1, wherein said textile comprises a woven fabric.
18. (Withdrawn) The device according to Claim 1, wherein said textile comprises a knit fabric.

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19. (Withdrawn) The device according to Claim 1, wherein said textile comprises a nonwoven material.
20. (Withdrawn) The device according to Claim 1, wherein said textile comprises a pile material.
21. (Withdrawn) The device according to Claim 1, further including an image disposed on the first surface of said textile having the coating thereon.
22. (Withdrawn) The device according to Claim 21, wherein the image disposed on said textile comprises a colorant selected from the group consisting of: dyes, pigments, and polymeric colorants.
23. (Previously presented) A device comprising:  
a textile substrate having a first surface;  
a coating on the first surface of said textile substrate, said coating including a repellent finish chemical, a cationic material, and a sorbant polymer, wherein the repellent finish chemical is present on the textile in an amount ranging from about 0.01 to about 15 dry weight percent on the weight of the textile.
24. (Previously presented) A device comprising:  
a textile substrate having a first surface;  
a coating on the first surface of said textile substrate, said coating including a repellent finish chemical, a cationic material, and a sorbant polymer, wherein the repellent finish chemical is present on the textile in an amount ranging from about 0.1 to about 5 dry weight percent on the weight of the textile.
25. (Previously presented) A device comprising:  
a textile substrate having a first surface;

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a coating on the first surface of said textile substrate, said coating including a repellent finish chemical, a cationic material, and a sorbant polymer, wherein the repellent finish chemical comprises a resin based finish.

26. (Previously presented) A device comprising:  
a textile substrate having a first surface;  
a coating on the first surface of said textile substrate, said coating including a repellent finish chemical, a cationic material, and a sorbant polymer, wherein the cationic material of said coating comprises a water soluble metal salt of cations selected from the group of the periodic table consisting of: Group II, Group III, and the Transition Metals.
27. (Previously presented) A device comprising:  
a textile substrate having a first surface;  
a coating on the first surface of said textile substrate, said coating including a repellent finish chemical, a cationic material, and a sorbant polymer, wherein the sorbant polymer is present on the textile in an amount ranging from about 0.01 to about 60 dry weight percent on the weight of the textile, and wherein the repellent finish chemical of said coating comprises a repellent fluorochemical.
28. (Previously presented) A device comprising:  
a textile substrate having a first surface;  
a coating on the first surface of said textile substrate, said coating including a repellent finish chemical, a cationic material, and a sorbant polymer, wherein the sorbant polymer is present on the textile in an amount ranging from about 0.1 to about 10 dry weight percent on the weight of the textile, and wherein the repellent finish chemical of said coating comprises a repellent fluorochemical.

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**IX. EVIDENCE APPENDIX**

Applicant is not aware of any evidence.

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**X. RELATED PROCEEDINGS APPENDIX**

Applicant is not aware of any such related proceedings.